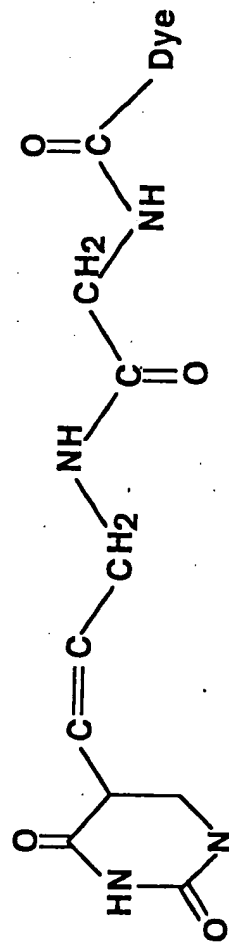


Diglycinyllinker



Tetraglycinyllinker

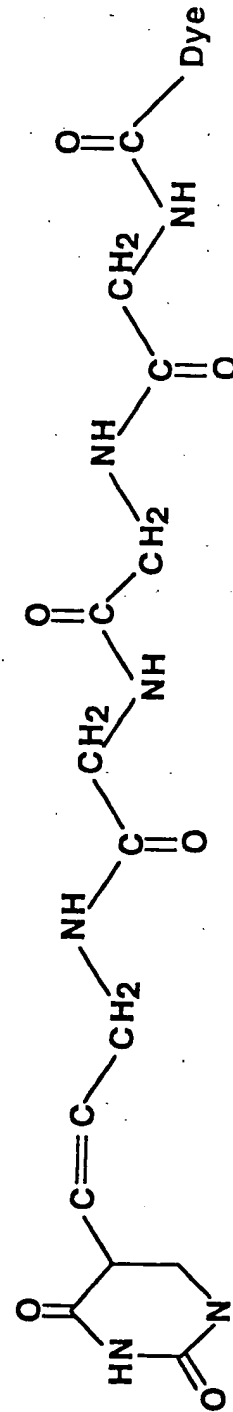
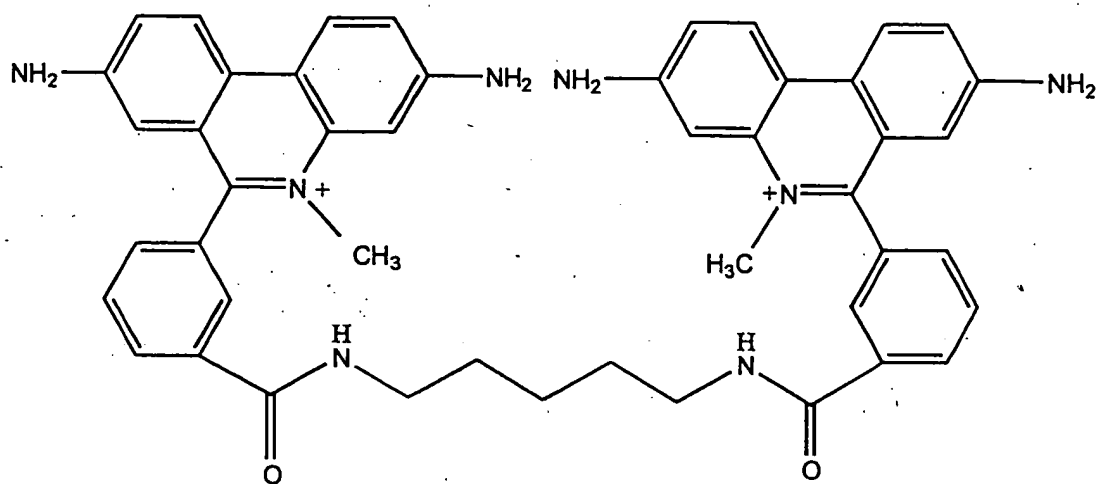
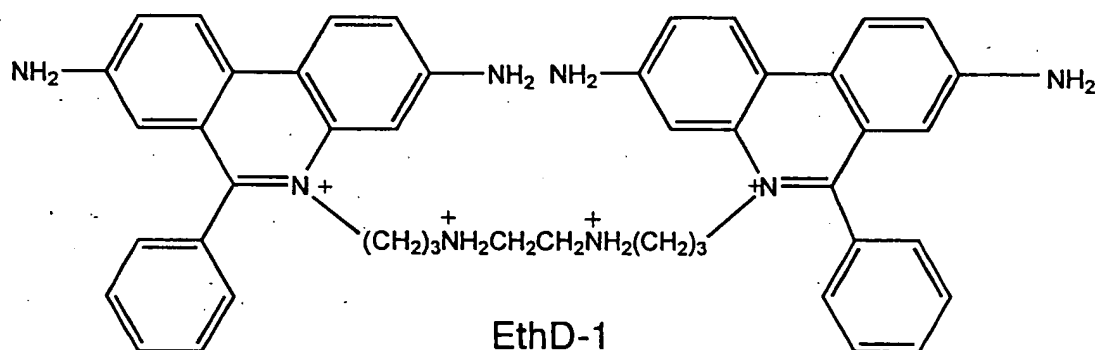


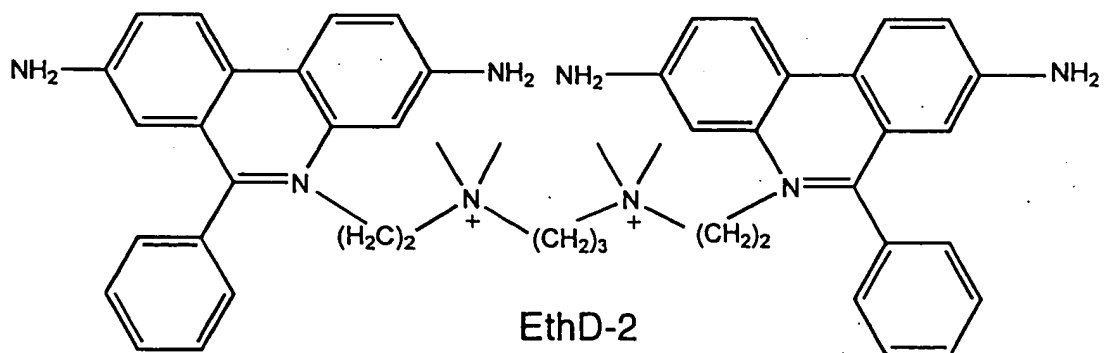
Figure 1



*meta*-EthD

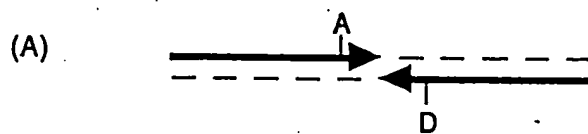


EthD-1



EthD-2

Figure 2



A = Energy Acceptor

D = Energy Donor

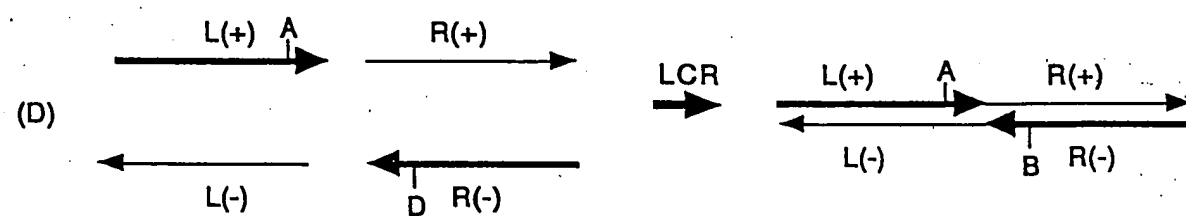
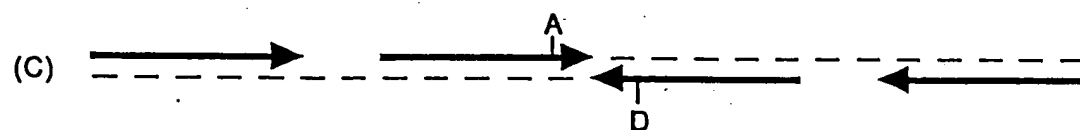
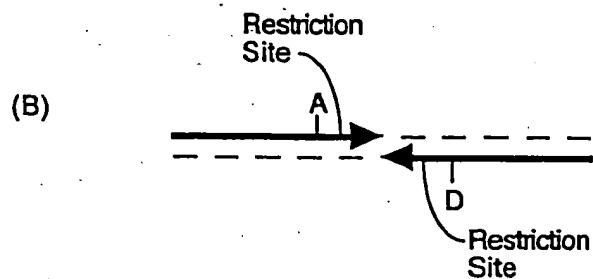


Figure 3

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Target Sequence

——GCGACCTGCGAATGCTATGGATCAGGCTAGCCA——  
——CGCTGGACGCTTACGATACCTAGTCCGATCGGT——

(A)

Donor  
↓  
GCGACCTGCGAATGCTATggatcaggctagcca  
cgctggacgcttacgataCCTAGTCCGATCGGT  
←  
Acceptor

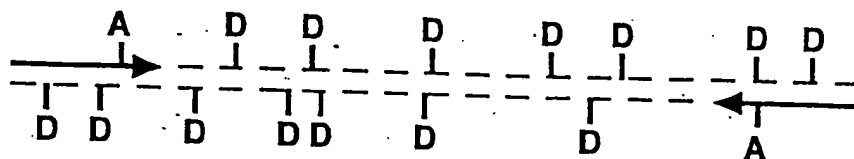
(B)

Donor  
↓  
GCGACCTGCGAATGCTATggatcaggctagcca  
cgctggacgcttacgatacctAGTCCGATCGGT  
←  
Acceptor

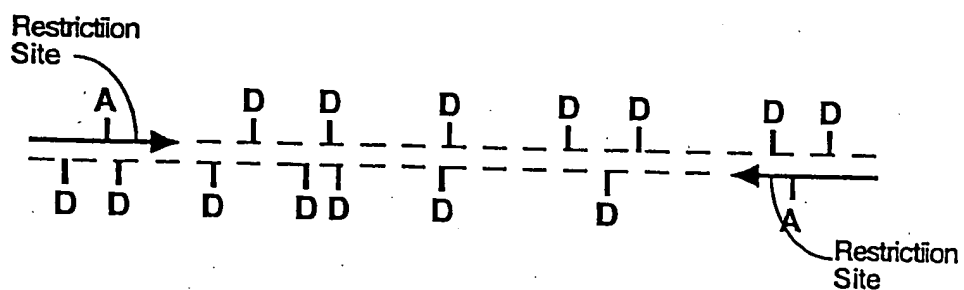
Figure 4

# BEST AVAILABLE COPY

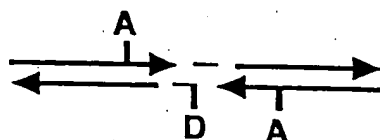
(A) PCR



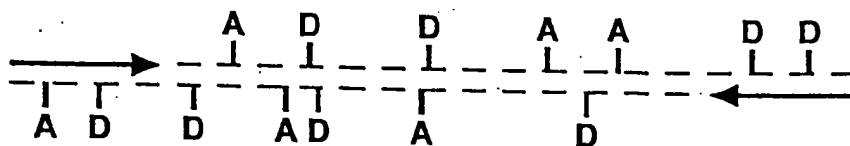
(B) SDA



(C) GAP-LCR



(D) PCR



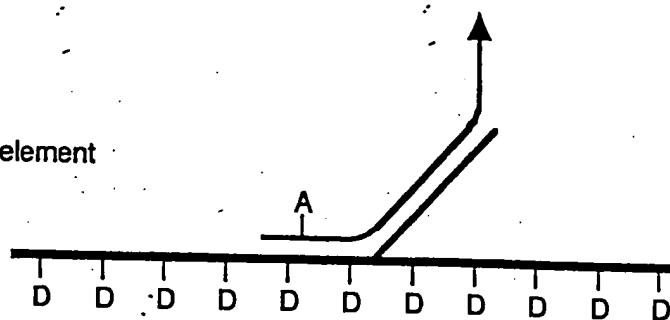
A = Energy Acceptor

D = Energy Donor

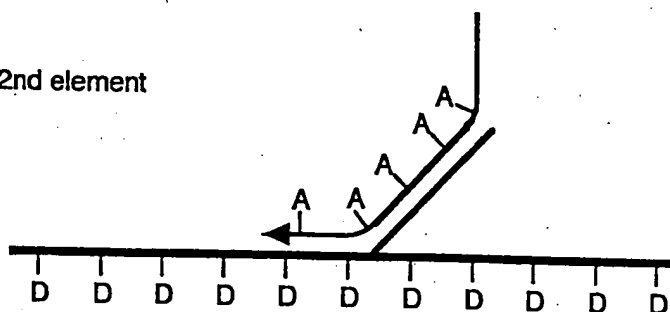
Figure 5

BEST AVAILABLE COPY

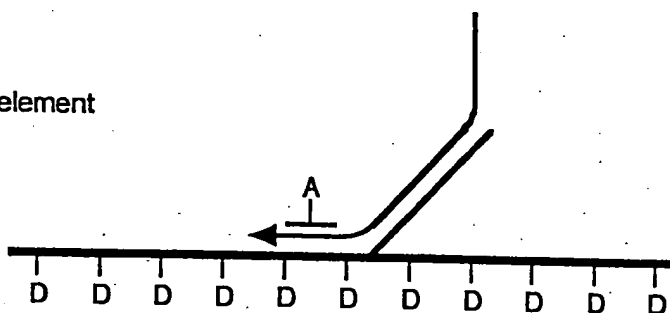
(A) Primer with 2nd element



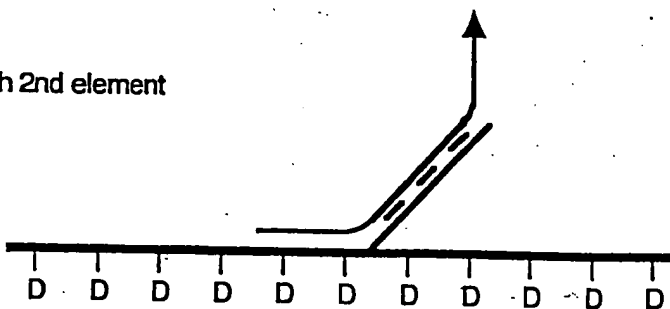
(B) Nucleotide with 2nd element



(B) Probe with 2nd element



(B) Intercalators with 2nd element



D = Energy Donor  
A = Energy Acceptor

Figure 6

BEST AVAILABLE COPY

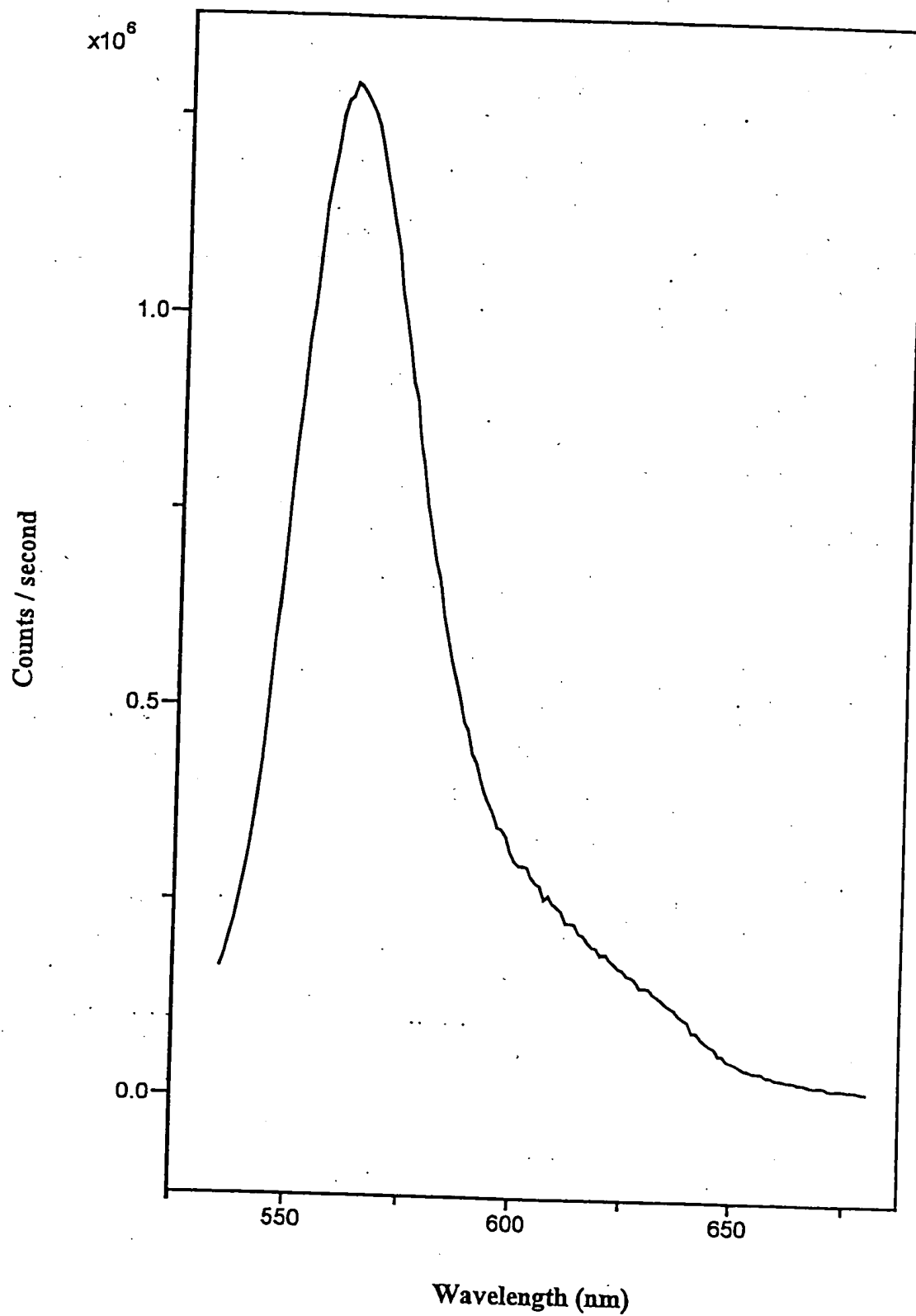


Figure 7

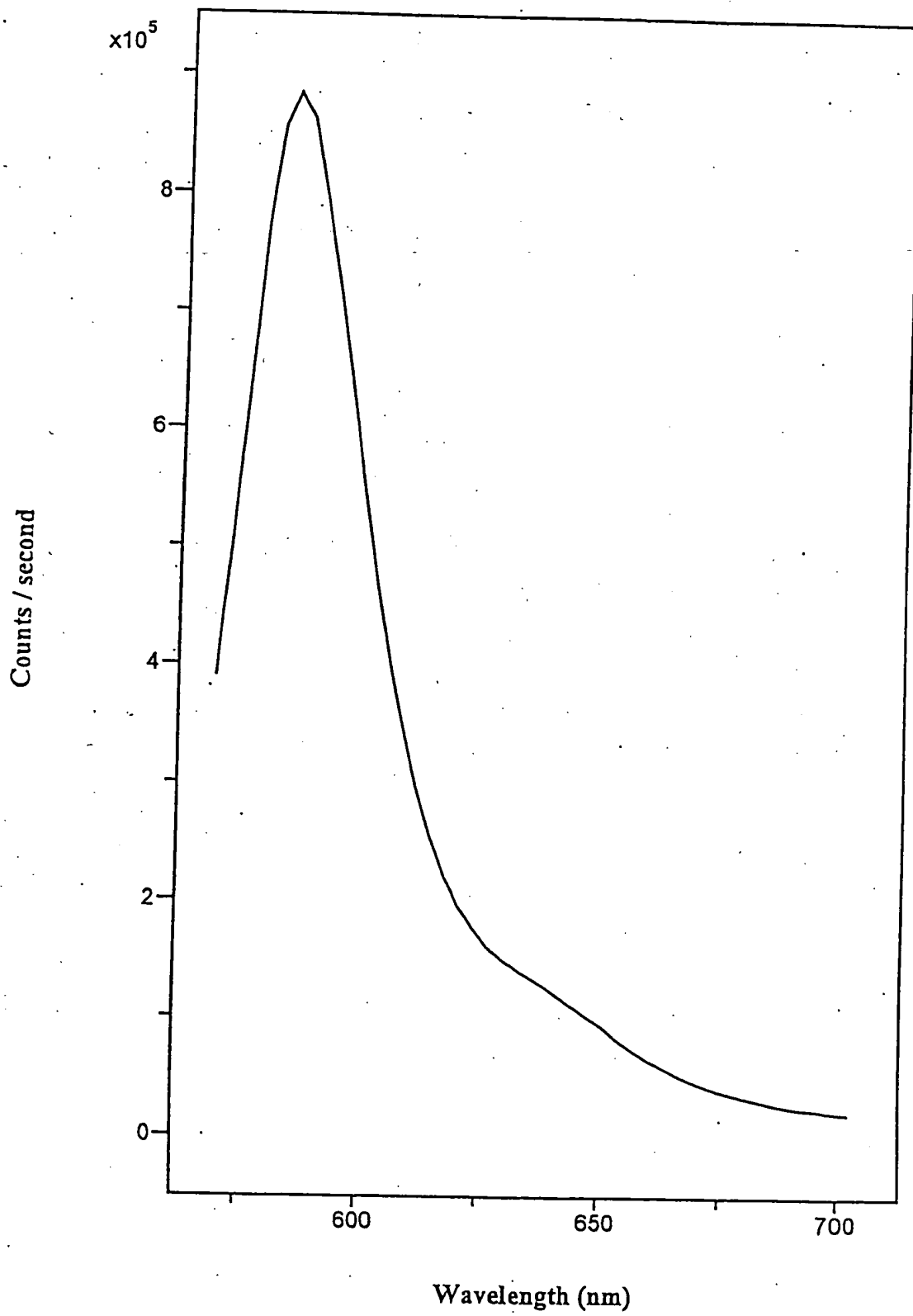


Figure 8



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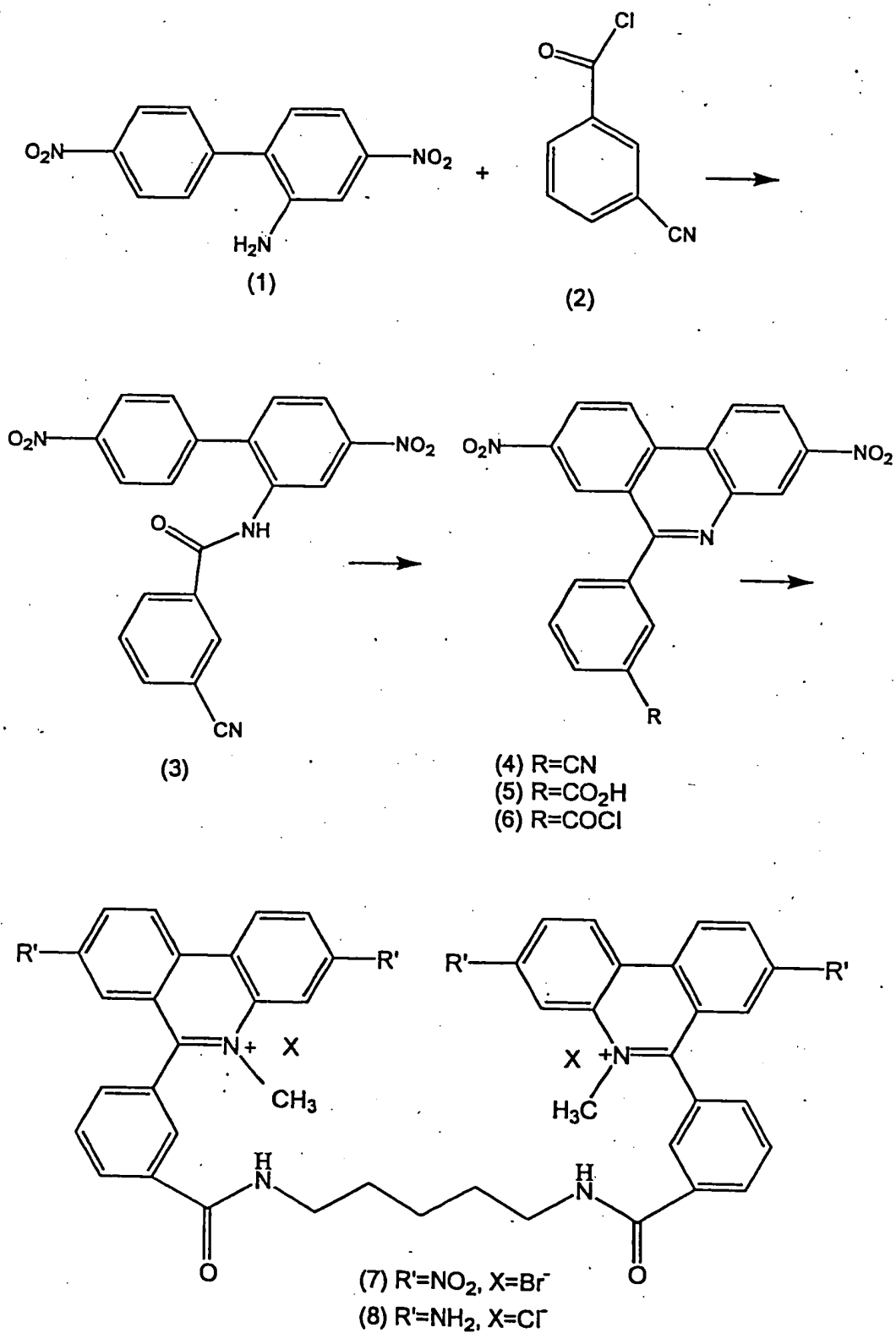
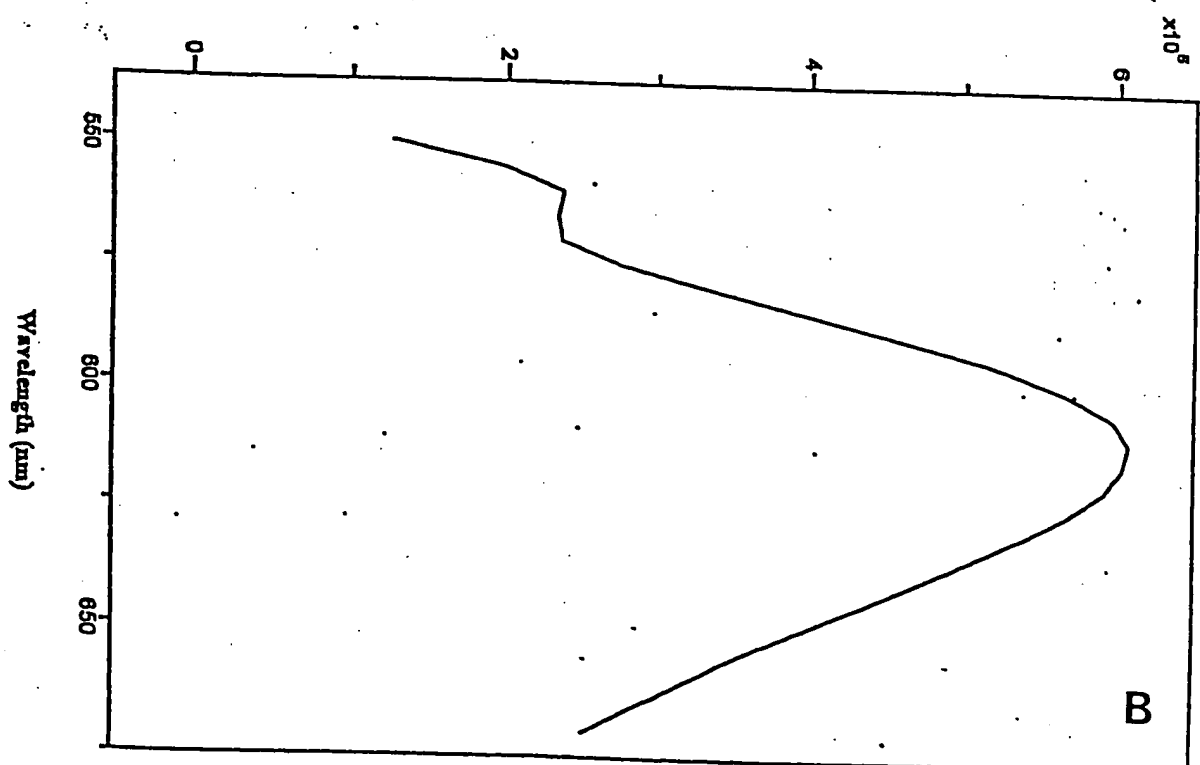
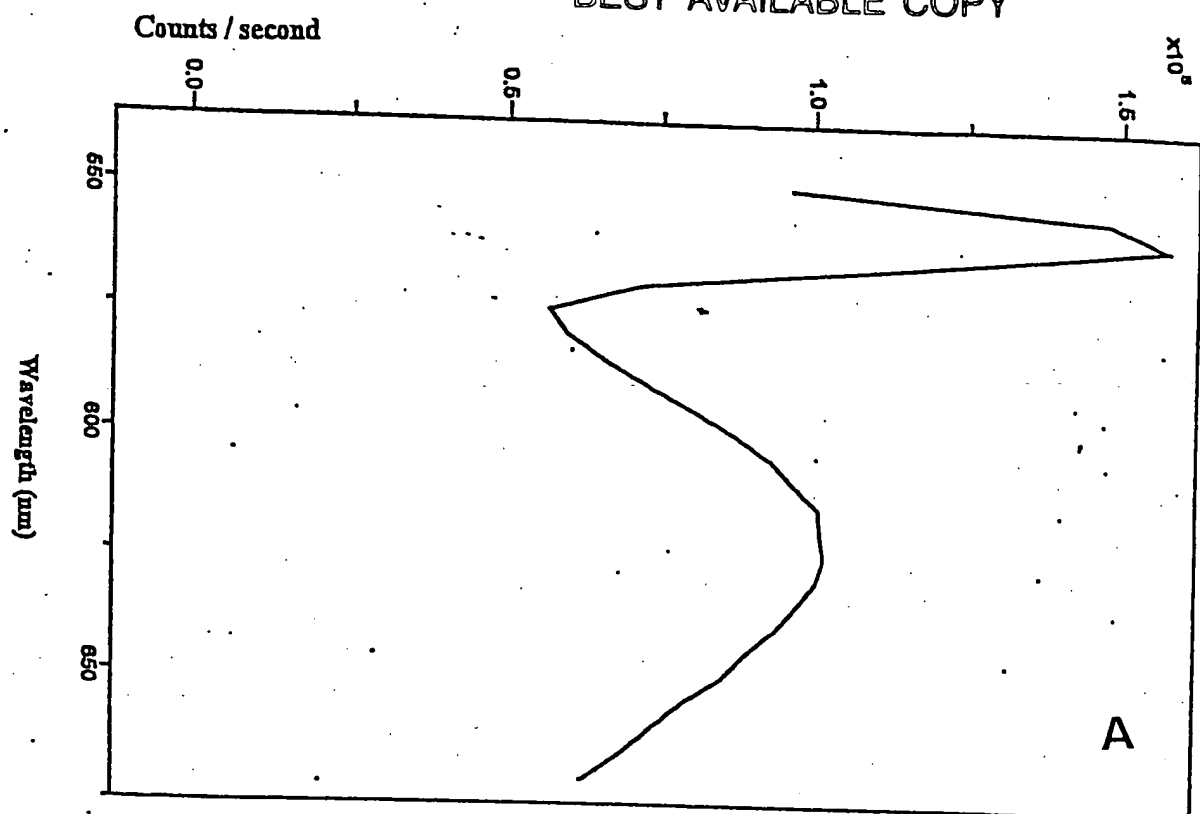


Figure 9

BEST AVAILABLE COPY



Illumination at 472 nM  
Figure 10

BEST AVAILABLE COPY

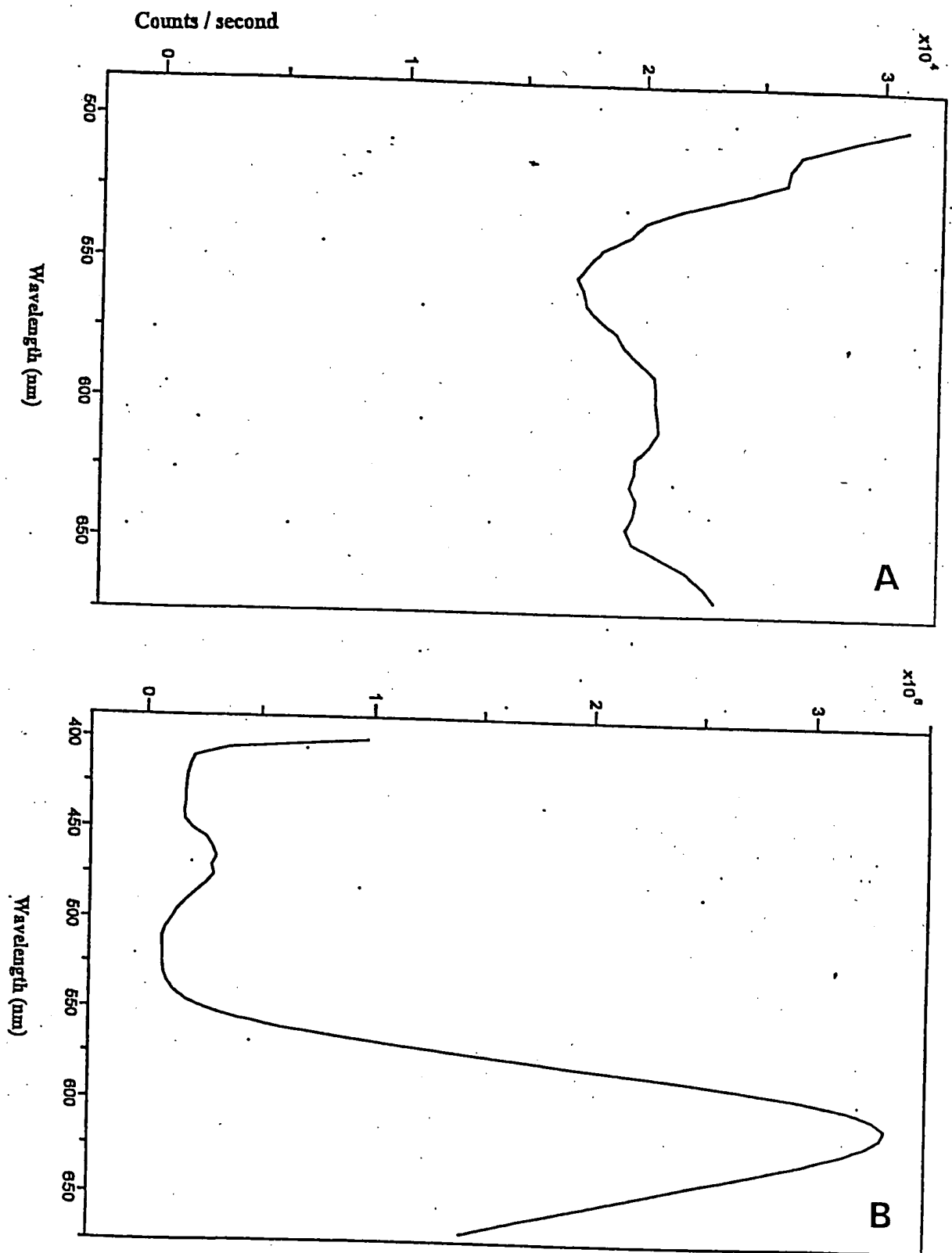


Figure 11

# HIV Anti-sense Amplicon

Forward Primer

catgatccgg atgggagggtg →

Hybridization Probe

taatgggtg agtatcccctg cctaactct →

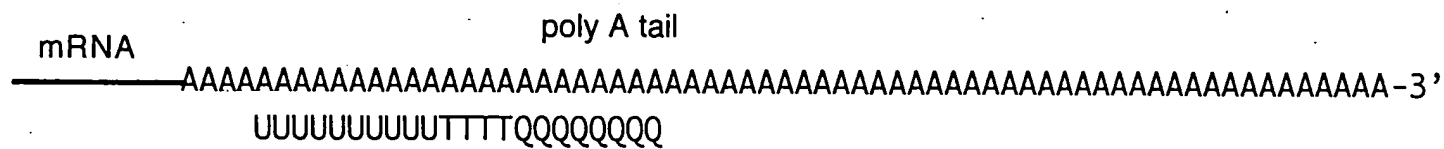
catgatccgg atgggagggtg ggtctgaaac gataatggtg agtatcccctg cctaactcta ttcactatcc ggatgtgc  
gtactaggcc taccctccac ccagactttg ctattaccac tcataggac ggattgagat aagtgatagg cctacacg

← agat aagtgatagg cctacacg

Reverse Primer

Figure 12

A) Binding of CNAC to poly A tail



CNAC

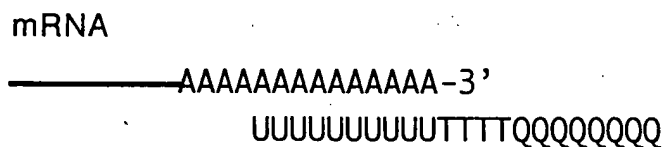
U = Uridine (ribonucleotide)

T = Thymidine (deoxyribonucleotide)

Q = Inosine (ribonucleotide)

B) elimination of poly A segment by RNase H

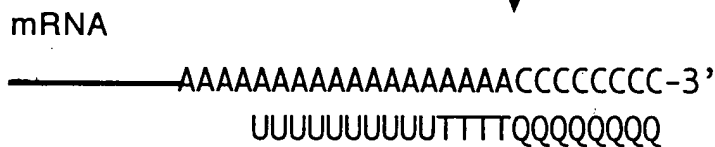
RNase H



CNAC

C) Incorporation of primer binding site by template dependent extension of analyte

Rerverse Transcriptase



CNAC

D) Removal of CNAC and binding of primer with promoter sequence



Figure 13

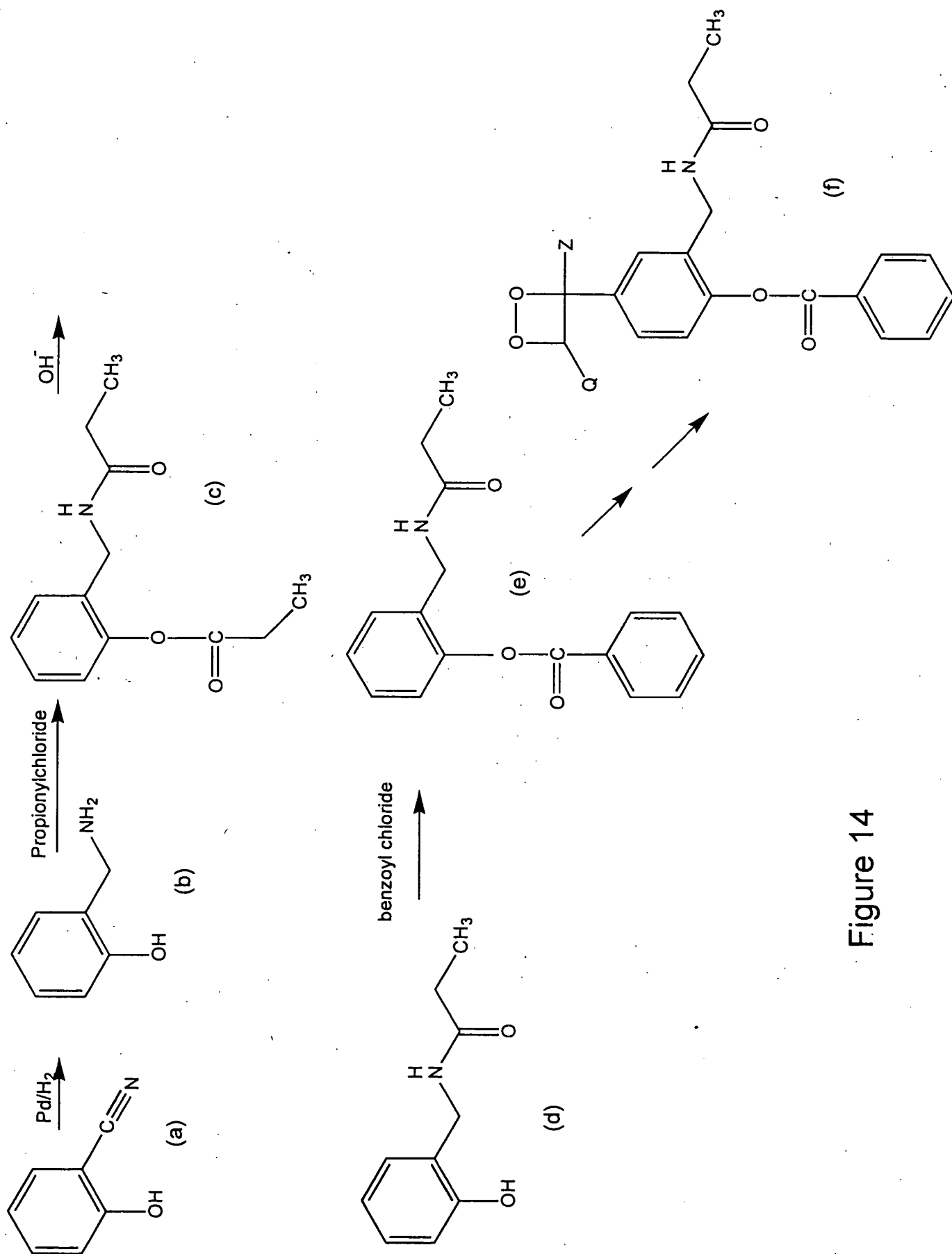


Figure 14

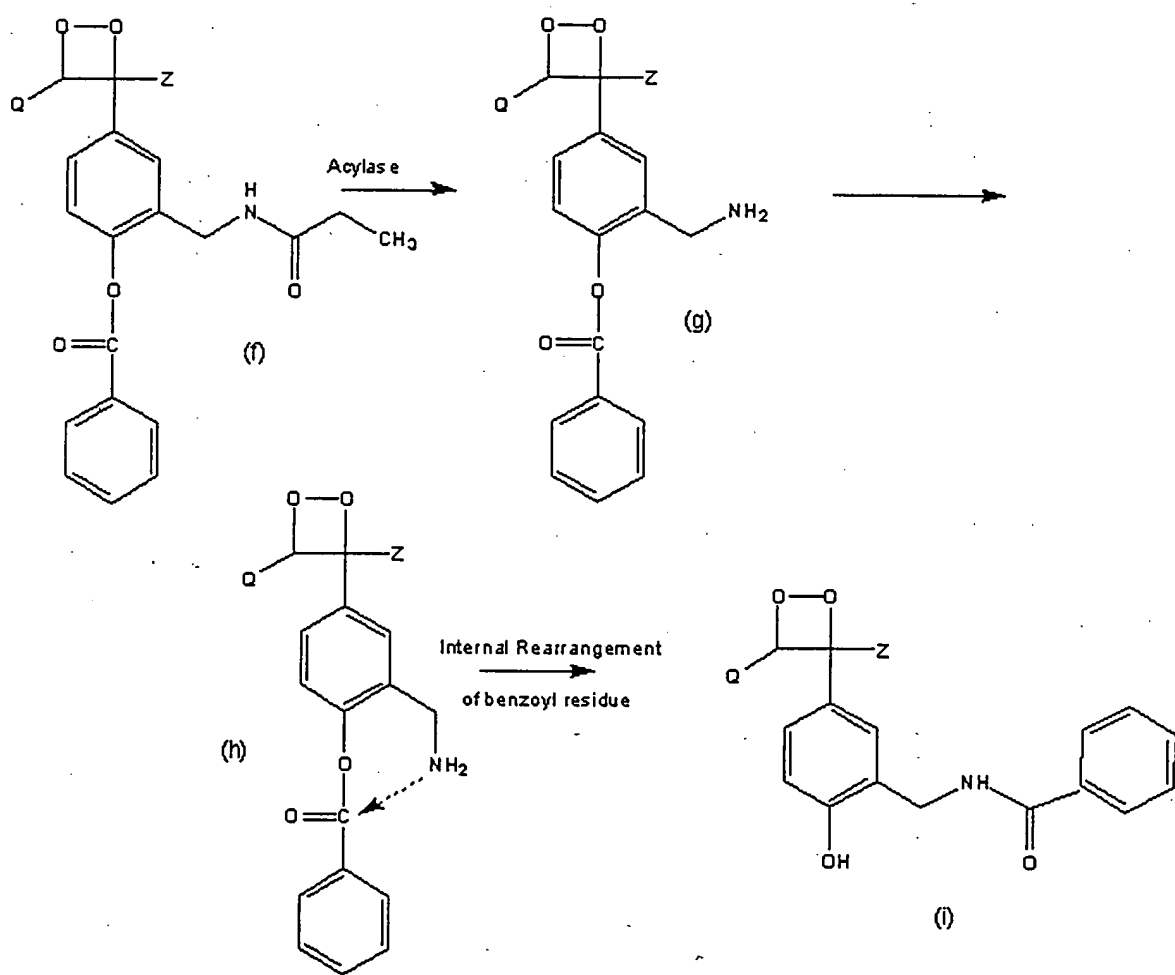


Figure 15